

Application No. 10/580,205
Amendment dated April 27, 2009
Reply to Office Action of January 27, 2009

Docket No.: 2360-0448PUS1

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes changes to FIG. 7 reference numerals --306-- & --311-- have been added.

Attachment: Replacement sheet

REMARKS

Claims 1-5 and 8-18 are pending in this application. Claims 6 and 7 have been canceled. New claim 18 has been added.

Specification and Claims

Minor changes have been made to the specification to place it in better form for U.S. practice.

Further, minor changes have been made to the pending claims, without affecting the scope thereof, to place them in better form for U.S. practice.

Drawings

(a) The drawings have been objected to because reference characters “600”, “308”, “312”, “326”, and “327” are not mentioned in the description.

Applicants submits that there is no reference character “600” in any of the drawings of the present application. Description of reference character “600” appears in page 21, line 8 of the specification (or in paragraph [0091] of the U.S. Patent Publication No. 2007/0137505).

Description of reference character “308” appears in page 18, line 11 of the specification (or in paragraph [0081] of the Publication).

Description of reference characters “312” appears in page 115, line 28 of the specification (or in paragraph [0072] of the Publication).

Description of reference characters “326” and “327” appears in page 18, lines 14-15 of the specification (or in paragraph [0082] of the Publication).

(b) The drawings have been objected to as failing to comply with 37 CFR 1.84(p)(4) because different reference characters are used to indicate the same part of the invention.

37 CFR 1.84(p)(4) provides:

(4) The same part of an invention appearing in more than one view of the drawing must always be designated by the same reference character, and the same reference character must never be used to designate different parts.

In view of this provision, Applicants submit that reference characters "10", "20", "30", and "40" that designate four independent press stations, respectively, are proper because, although each press station may be structurally the same, they are independent elements and not the "same part." Further, in page 13 of the specification, element 10 is designated as the "first press station," element 20 is designated as the "second press station," element 30 is designated as the "third press station," and element 40 is designated as the "fourth press station." Therefore, it is clear that each of the press stations is not the "same part" of the invention. Applicants respectfully submit that the same applies to other elements of each press station pointed out by the Examiner in the Office Action.

Further, reference characters "101" and "102", and "106" and "107" are not the "same part" because they are two independent parallel vertical posts and two independent drives, respectively (see page 14, lines 20-29 of the specification).

In view of this, the Examiner is respectfully requested to approve and enter these drawing changes, and reconsider and withdraw this drawing objection.

Claim Objections

Claims 1 and 3 have been objected to because of lack of antecedent basis for "it."

In view of this, these claims have been amended to overcome this objection.

The Examiner is respectfully requested to reconsider and withdraw this objection.

Claim Rejections - 35 U.S.C. § 112

Claims 8 and 15 have been rejected under 35 U.S.C. § 112, second paragraph, because of some informalities.

In view of this, these claims have been amended to overcome this rejection.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

Claim Rejections - 35 U.S.C. § 103

(a) Claims 1, 2-4, 5, 12, and 14-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawamoto (US 2003/0084701), VanderZee et al. (USP 5,979,212), and Darr et al. (DE 4101513). This rejection is respectfully traversed.

(Claim 1)

Claim 1 has been amended to claim:

the assembly comprises a pivoting mechanism for pivoting the lateral beam about a horizontal pivotal axis perpendicular to the transport direction, the pivoting mechanism including two spindles, the two spindles being independently operable to pivot and vertically displace the lateral beam,

the grippers are rotatably movable for at least compensating a change of orientation of the work piece due to the pivoting of the lateral beam, and

the lateral beam includes two couplings arranged along a longitudinal extension of the at least one lateral beam, whereby each of the couplings cooperates with one of the two spindles.

Claim 1, as amended, now includes features recited in claims 6 and 7.

Kawamoto is directed to a conveyor for a press line, where cross bars having grippers for gripping the work pieces extend between transport-carriages arranged at both sides of the press (page 1-2, paragraph [0013]; Fig. 4). The transport-carriages are independently movable on horizontal supporting rails extending parallel to the transport direction of the conveyor. The supporting rails are movable in a vertical direction.

In contrast to the present invention, no pivotable lateral beams are disclosed. Consequently, no spindles are disclosed that are independently operable to control a pivoting movement.

VanderZee is directed to a transfer system of a multiple station transfer press (col. 2, lines 38-40). The system comprised cross bar assemblies having pairs of opposite carriages 42 with two cross bars 130, 132 extending between each pair of carriages; the carriages are mounted on a pair of transfer rails 40 that extend along the length of the transfer press (col. 3, lines 35-42). The transfer rails 40 are vertically movable (co. 7, lines 32-34). Further, each carriage 42 comprises a substantially longitudinal bar that is pivotable about a horizontal axis and carries one end of the cross bars 130, 132 in a linearly movable fashion, allowing for adjusting the orientation of the workpieces during the transport (col. 14, line 44 - col. 15, line 4).

The transport process is fundamentally different from that of the present invention. The vertical displacement is effected by linearly raising or lowering the cross bar assemblies (col. 12, line 1-2; col. 14, lines 53-59), the principal horizontal displacement is effected by a linear movement along the transfer rail, i.e., displacing the carriage (col. 7, lines 21-25). Due to the fact that two cross bars are attached to the longitudinal bars on both sides of the pivoting axis, this mechanism cannot provide the principal vertical movement of the workpieces. Further, the corresponding pivoting mechanism does not comprise two spindles cooperating with coupling element attached to a support.

Upon rejecting claims 6 and 7, the Examiner alleges that Darr discloses the features recited in these claims.

Applicants submit that Darr is directed to a mechanism for adjusting the width of the gripper bars of a transfer press (col. 1, lines 3-7). The mechanism comprised slides movable by means of lever gears, whereas carrier elements for the gripper bars are supported on the slides in a vertically movable fashion (col. 2, lines 14-23 and 61-66). Each of the carrier elements 3 may be moved in a horizontal direction, perpendicular to the (horizontal) transport direction by means of a spindle 11, which is correspondingly oriented horizontally, perpendicular to the transport direction (col. 2, lines 30-38). Therefore, employing

the spindles 11, the distance of the two carrier elements (and therefore of the gripper bars) may be adjusted (see also col. 3, lines 7-12).

Therefore, first of all, only one spindle is coupled to one lateral beam, and correspondingly a single lateral beam does not include two couplings arranged along its longitudinal extension, each of them cooperating with one of the two spindles. Further, the spindles are not operable to pivot and vertically displace a lateral beam but only to horizontally displace a lateral beam. It is to be noted that Darr contains no reference whatsoever to pivoting a lateral beam.

In view of this, even assuming that Kawamoto, VanderZee, and Darr can be combined, which Applicants do not admit, one skilled in the art would not conceive the claimed features of the present invention.

Claims 2-4, 5, and 12, variously dependent on claim 1, are allowable at least for their dependency on claim 1.

(Claim 14)

In the Office Action, the Examiner acknowledges that Kawamoto does not teach a transfer press with a pivoting mechanism. Therefore the Examiner relies on the VanderZee reference and alleges that it discloses this feature.

Applicants submit that VanderZee shows a longitudinal bar that is pivotably attached to a horizontally and vertically movable carriage, and does not disclose or suggest the claimed invention at least for the following.

First, according to VanderZee, the workpiece is held by two cross bars attached to the pivotable bar; the pivoting axis is arranged in a middle portion of the bar, i.e., in between the cross bars. Therefore, it is not possible by lifting the workpiece by pivoting the bar about the horizontal pivot axis as this principally results in changing the orientation of the workpiece, lifting one end of the workpiece, while lowering the opposite end.

Further, the transportation of the workpiece to the second station is not effected by moving the (cross) bar along a longitudinal extension of the pivotable bar but by moving the carriage along a longitudinal extension of a transfer rail. The cross bars are movable along the longitudinal extension of the bar, but the purpose of this degree of freedom is adjusting the relative separation of the two cross bars (see col. 12, lines 27-56). In view of this, the process disclosed by VanderZee is conceptually different from the claimed invention.

In view of this, Kawamoto and VanderZee, taken singly or in combination, fail to disclose or suggest the claimed feature of the present invention.

Claims 15-17, variously dependent on claim 14, are allowable at least for their dependency on claim 14.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

(b) Claims 6-11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over VanderZee and Kawamoto, and further in view of Darr. This rejection is respectfully traversed.

Claims 6 and 7 have been canceled.

Claims 8-11, variously dependent on claim 1, are allowable at least for their dependency on claim 1.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

New Claim

Claim 18, dependent on claim 1, is allowable at least for its dependency on claim 1.

A favorable determination by the Examiner and allowance of this claim is earnestly solicited.

Conclusion

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and objections, and allowance of the pending claims are earnestly solicited.

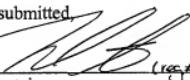
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Maki Hatsumi Reg. No. 40,417 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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